

F.A.R. Part 150

Noise Exposure Map Checklist - Part II

I. Identification and Submission of Map Document

A. A submission needs to be properly identified as a noise exposure map submission under Part 150, or as noise exposure maps and a noise compatibility program submitted under Part 150 if these are submitted together. If the submission is a revision to maps previously found in compliance with Part 150, it needs to be so identified. (First time map submissions do not need to be specifically identified as such.)

B. The airport name and the airport operator's name need to be identified. Under ASNA and Part 150, noise exposure maps must be submitted by the operator of a public use airport, including heliports.

(A and B) It is desirable to have the above information on the cover page of the submission. However, there is no format specified in the regulation, so it is acceptable to otherwise present this information so long as it is included and clearly understandable.

C. In addition, in order to verify that the submission has come to FAA from the airport operator instead of another party, the submission must be accompanied by a cover letter from the airport operator. The airport operator's letter should clearly identify the submission as a Part 150 submission for appropriate FAA determinations (as opposed to a preliminary or partial submission of material for FAA informal advice).

II. Consultation

A. ASNA and Part 150 have some very specific consultation and public participation requirements. 150.21(b) requires a narrative description of the consultation accomplished on the noise exposure maps and of the opportunities afforded the public to review and comment during the development of the map. This narrative must include the information described below. (If noise exposure maps and a noise compatibility program are submitted together, it is preferable, but not required, for the consultation requirements to be documented in one section of the Part 150 submission and to cover both map and program consultation requirements.)

B. The map documentation must clearly identify the various consulted parties. Under 150.21(b), the parties to be consulted by the airport operator are: FAA officials, state officials, public and planning agencies within the Ldn 65 dB, other Federal officials that have local responsibility for the area within the Ldn 65 dB depicted on the maps, and regular aeronautical users of the airport. As indicated in 150.21(b) and A150.105(a), each public agency and planning agency whose jurisdiction or responsibility is either wholly or partially contained within the Ldn 65 dB boundary is to be identified by name in the narrative documentation and consulted. "Regular aeronautical users" of the airport include major users such as representatives of fixed base operators, airlines, airline pilots, business aviation, individual general aviation pilots, cargo operators, and other affected airport tenants.

C. In accordance with 150.21(b), the map documentation must describe the consultation accomplished with respect to the noise exposure maps and must describe the opportunities afforded to the public to review and comment during the development of the

map. Additionally, the airport operator must certify that it has afforded interested persons an adequate opportunity to submit their views, data, and comments concerning the correctness and adequacy of the draft noise exposure map and descriptions of forecast aircraft operations. The map documentation, therefore, must include both the specific certification required by the rule and a description of consultation and public participation.

It is important for the narrative description to indicate that consultation with the required parties was effected during the development and preparation of the maps and related documentation and that there was a real opportunity for review and input by the public on the correctness and adequacy of the map data at the developmental draft stage. Consultation and review by the interested public are most often accomplished through the creation of Part 150 advisory committees or task forces established before map development gets underway. However, the Part 150 regulation does not specify any particular participation vehicle, such as a task force; it allows flexibility on the part of the airport operator on how to meet consultation/participation requirements.

Reasonable and fair representative participation to the extent practicable is expected not that every aviation user or every member of the interested public must be allowed to actively participate on an advisory committee or task force. However, all written comments from any party are to be received and considered. The consultation requirements of Part 150 are not deemed to be flawed because a party or parties declines to participate so long as there is evidence in the documentation that adequate opportunity to participate was extended by the airport operator.

D. 150.21(b) requires a copy of all written comments received during consultation to be filed with the FAA region. Since these comments will be on file, but will not be included in the Part 150 document itself, the map documentation should include the information that either there were no written comments received or that written comments are on file with the FAA region. (While the Part 150 regulation requires the airport operator to respond to comments received on the noise compatibility program, there is no parallel requirement to respond to comments received on the noise exposure maps. However, airport operators may include responses in their map documentation to significant questions or issues at their option.)

III. Noise Exposure Maps General Requirements

A. 150.21 requires the submission of 2 maps an existing condition map and a 5 year map. These must be clearly labeled in the airport operator's submission with the year which each map represents indicated on the face of each map. Only one existing condition map and one 5 year map may be designated by the airport operator as the maps for a compliance finding at any one time under Part 150. This does not preclude the inclusion in the package of additional maps for supporting information, analytical purposes or longer range planning. (Refer to the Noise Compatibility Program Checklist Narrative, section III, for further information regarding noise exposure maps that are included as part of noise compatibility programs.)

B. In accordance with 150.21, the existing condition map must be based on current data as of the date of submission (i.e., year of submission) to the FAA regional or district office. The 5 year map must be based on forecast aircraft operations at the airport and on other reasonable planning assumptions (further described below in V.A.) for the fifth calendar year beginning after the year of submission. If the maps are based on data generated for timeframes other than the current year of submission and the fifth year following the year of submission, the airport operator must verify that the data are representative of existing and of 5 year forecast conditions (i.e., airport layout, runway

use percentages, flight tracks, general aircraft mix and operational data, and noncompatible land uses are equivalent; total numbers of operations do not vary over 15 percent in the aggregate). In these cases, airport operators must indicate that they have verified accuracy of map data by stating in the documentation to the effect that the map based on year's data accurately represents the year of submission and/or that the forecast map developed for year accurately represents the 5 year forecast from the date of submission. (If airport operators are unable to verify adequacy of data, maps must be redone in order to be acceptable under Part 150.)

C. It is the airport operator's option to include or not to include the 5 year noise abatement/mitigation recommendations within the noise compatibility program on the 5 year noise exposure map (if maps and program are completed together). The airport operator is expected to include information on which option has been selected and to identify any specific noise compatibility program measures which are reflected on the map and to describe as specifically as possible how these measures affect the compatibility of land uses on the map. If the 5 year map does not include noise compatibility program recommendations, the airport operator has the additional option of including a revised 5 year map within the noise compatibility program. (This option is described in more detail in the Noise Compatibility Program Checklist Narrative.)

IV. Map Scale, Graphics, and Data Requirements

A. The noise exposure maps must be of sufficient scale to be clear and readable. A150.103(b)(1) requires a map of the airport and its environs at "an adequately detailed scale" not less than 1 inch to 8,000 feet. A150.101(e)(9) requires maps to be of a sufficient scale and quality to discern streets and other identifiable geographic features. If 1 inch to 8,000 feet is not sufficient for this latter purpose, a larger scale will be necessary. The scale used should be indicated on the face of the maps.

B. The graphics must be of a good enough quality to display the information required on the maps in a clear and readable manner. A north arrow on the maps, although not specifically required in the Part 150 regulation, is part of good map drafting and a highly desirable feature.

C. A150.103(b)(1) requires the noise exposure maps to depict the airport and its environs.

1. The airport layout data listed below must be graphically depicted to scale on the existing condition and 5 year noise exposure maps. The 5 year map may show the same airport layout as the existing condition map, or it may show a different airport layout based on reasonable future assumptions, including any planned airport development (150.21(a)(1)). (Future assumptions must be adequately explained in the narrative accompanying the maps.)

- a. Airport boundaries, required by A150.101(e)(4).

- b. Runway configurations including runway end numbers, required by A150.101(e)(1).

2. The required off airport data are listed below. The 5 year map may show the same off airport data as the existing condition map, or it may be different based on reasonable future planning assumptions which are explained in the narrative accompanying the maps (150.21(a)(1)).

- a. Each land use base map must depict streets and other identifiable geographic features (A150.101(e)(9)).

b. A land use base map is usually larger than the area within the Ldn 65 dB contour; as a minimum, land use base map data must be shown within the Ldn 65 dB contour (A150.101(a)).

c. Each map must clearly delineate the geographic boundaries and show the names of the jurisdictions with authority to plan and control land uses within the depicted noise contours (A150.105(b)). If there is only one jurisdiction covering the entire area whose boundaries extend beyond the geographic area shown on the maps, the name of that jurisdiction should be on the maps. The accompanying narrative would be expected to identify the jurisdiction as the only one with land use planning and control authority in the map environs.

D. Continuous noise contours of Ldn 65, 70, and 75 dB based on current and 5 year forecast airport data and aircraft operation data must be graphically depicted on the existing condition and 5 year noise exposure maps, as required by A150.101(a) and A150.101(e)(3). Additional noise contours are optional (A150.101(a)).

E. Flight tracks for the existing condition and 5 year forecast timeframes must be graphically depicted, as required by A150.101(e)(2). Flight tracks may be depicted on supplemental maps instead of on the basic existing condition and 5 year noise exposure maps in the interest of avoiding too much clutter. Supplemental maps must employ the same land use base maps that are used for the existing condition and 5 year maps. Flight tracks should be numbered on the graphic display to correspond to accompanying narrative descriptions.

F. If noise monitoring was used in the study, the locations of any aircraft noise monitoring sites must be graphically depicted, as required by A150.101(e)(7). (Note that noise monitoring is optional, not required by Part 150.) As with flight tracks, noise monitoring sites may be depicted on supplemental maps instead of the basic existing condition and 5 year noise exposure maps in the interest of avoiding too much clutter.

G. The final pieces of information which are required to be graphically depicted on the basic existing condition and 5 year noise exposure maps are those relating to noncompatible land uses and include the following:

1. Noncompatible land uses within the noise contours, as required by A150.101(e)(5). Noncompatible land uses within the Ldn 65 dB contour and greater are required to be depicted on the maps. If an airport operator has opted to include additional noise contours below Ldn 65 dB on the maps, the operator may also optionally identify noncompatible land uses below Ldn 65 dB on the maps, as allowed in A150.101(b) and table 1 of appendix A.
2. Noise sensitive public buildings, including schools, hospitals, health care facilities, and properties on or eligible for inclusion on the National Register of Historic Places must be graphically identified within the noise contours, as required by A150.101(e)(6).
3. Noise sensitive public buildings and other noncompatible land uses (usually primarily residential) must be clearly marked on the maps in a manner that allows them to be readily identified (e.g., special symbols, colors, shading, cross hatching). There must be a legend on the face of each map which relates the selected markings to the specific noncompatible land uses which have been identified.

4. Note that compatible land uses are not required to be identified on noise exposure maps. Land uses which might normally be anticipated to be identified as noncompatible under Part 150, but are not so identified for various satisfactory reasons in an airport operator's submission, should be explained in the accompanying narrative as further described below in V.E.3. and 4.

V. Narrative Support of Map Data

A. The technical data on which both maps are based must be adequately described in the accompanying narrative. This includes existing and 5 year forecast numbers of aircraft operations, types of aircraft operations, types of aircraft and fleet mix, runway percentage use and flight track usage, day/night breakout of operations, explanation of any planned airport development within 5 years which will affect airfield operation, land use and population data, and incorporation of any noise abatement strategies in either or both maps. The sources for this data should be indicated. 150.21(a)(1) requires the 5 year map to be based on reasonable assumptions concerning future type and frequency of aircraft operations, number of nighttime operations, flight patterns, airport layout including planned airport development, planned land use changes and population changes in the surrounding areas. The sources for this data should also be indicated. The FAA must be satisfied with the adequacy of the underlying technical data for both maps and with the reasonableness of the planning assumptions for the 5 year map in order to find the maps in compliance with Part 150.

B. With respect to the calculation of noise contours:

1. The narrative must indicate the methodology used to develop the noise contours. The noise contours must have been developed using an FAA approved methodology or computer program, such as the current version of the Integrated Noise Model, Heliport Noise Model, or NOISEMAP 5.0 (when used with the SAELAT input setup card) or other FAA approved equivalent (A150.1(b) and A150.103(a)). Both maps must use the same model and the same version of that model in order to be comparable. If a model does not already have blanket approval by the FAA for use in Part 150 studies, it must receive specific approval by the FAA's Office of Environment. The approval letter from the Office of Environment should be obtained prior to using a model in a Part 150 study and should be included in an airport operator's submission. If this has not been done, the FAA region must obtain the requisite approval from the Office of Environment before finding the submission in compliance with Part 150.

2. A150.103(b)(6) requires the use of the government furnished data depicting aircraft noise characteristics (if not already a part of the computer program's stored data bank). Airport operators or their consultants are not allowed to alter the basic acoustic data in FAA approved noise models, often referred to as "calibration." It is permitted to substitute one aircraft type for another for which noise data is not readily available. Any aircraft substitution must be determined to be technically acceptable by the Office of Environment. That office's letter of technical acceptability should be requested by the airport operator or consultant prior to using the aircraft substitution data; the letter must be included in the airport operator's submission. Any questions or uncertainties regarding the correct use of noise models should be referred by the FAA regional office to the Office of Environment for resolution or verification before finding noise exposure maps in compliance with Part 150. Airport operators must make available to the FAA upon request the information in A150.103(b) that was used in their submissions for input to the calculation of noise contours, should questions be

raised by the FAA concerning the proper calculation of those contours. This data input does not normally need to be included in the Part 150 narrative.

3. A150.1(b) states that noise monitoring may be utilized by airport operators for data acquisition and data refinement, but is not required by Part 150 for the development of noise exposure maps. (Note: Noise monitoring may not be used to "calibrate" the noise model.) Whenever noise monitoring is used, it should be accomplished in accordance with A150.5. The narrative is expected to indicate that Part 150 guidelines were followed; if they were not followed, coordination with the Office of Environment is necessary to ascertain acceptability.

4. If the noise exposure maps include noise contours in addition to the Ldn 65, 70, and 75 dB contours, as allowed under A150.101(a), the narrative should explain the local reasons for including them.

C. With respect to noncompatible land use information:

1. The narrative must give estimates of the number of people residing in noncompatible areas within the Ldn 65, 70 and 75 dB contours for the current noise exposure map and for the 5-year map, in accordance with A150.101(e)(8).
2. The narrative must indicate the basis on which the airport operator has determined land use compatibility on the noise exposure maps. If the airport operator has used table 1 in appendix A of Part 150, the narrative should so state. (It is highly desirable to include a copy of table 1 in the airport operator's submission to assist the non FAA reader.) If the airport operator has made adjustments to the land use compatibility designations in table 1 based on the consideration of specific local conditions (including the identification of noncompatible land uses below Ldn 65 dB), as allowed in A150.101.(b) and (d) and in table 1, the narrative must clearly indicate which adjustments were made and the local reasons for making them. The narrative should include the airport operator's complete substitution for Part 150's table 1. In accordance with 150.11 and A150.101(c), if more than one current or future land use is existing or permissible in a particular area, the determination of compatibility (under either table 1 or other local land use guidelines) must be based on the use that is considered to be most adversely affected by noise.

3. A150.101(e)(5) states that no land use has to be identified as noncompatible if the self generated noise from that use and/or the ambient noise from other nonaircraft and nonairport uses is equal to or greater than the noise from aircraft and airport sources. Data on the level of self generated or ambient noise must be included in the narrative for noise exposure map submissions which base compatible/noncompatible land use identifications on noise that is not aircraft and airport related. (Such data will affect compatible land use determinations under Part 150, but may not be used to adjust the outlines of the noise contours resulting from aircraft operations.)

4. If the noise exposure maps include land uses which are considered to be normally noncompatible according to table 1 of Part 150 (or the airport operator's substitution for table 1), but are not identified on the maps as noncompatible, the narrative is expected to indicate satisfactory reasons why this is the case with reference to the specific geographic areas so that the FAA may be sure that the maps are correctly done. Satisfactory reasons would include higher levels of self generated noise or ambient noise or the achievement of compatibility through sound attenuation or easement.

5. The narrative must describe the way, if any, that forecast operations at the airport, including forecast changes that are anticipated to result from planned airport development, will affect the compatibility of land uses depicted on the 5 year map, in support of 150.21(a)(2).

VI. Map Certifications

A. The airport operator is required by 150.21(b) to certify that it has afforded interested persons adequate opportunity to submit their views, data, and comments concerning the correctness and adequacy of the draft noise exposure maps and descriptions of forecast aircraft operations.

B. The airport operator is further required by 150.21(e) to certify that each map (or revised map) and description of consultation and opportunity for public comment are true and complete.

(A and B) It is desirable to have the certifications on a page at the beginning of the airport operator's map documentation; however, no specific format is required by regulation.